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**Translation**

PATENT COOPERATION TREATY

**PCT**

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1.158.PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE98/01178	International filing date (day/month/year) 24 April 1998 (24.04.1998)	Priority date (day/month/year) 12 August 1997 (12.08.1997)
International Patent Classification (IPC) or national classification and IPC G07D 7/12		
Applicant WHD ELEKTRONISCHE PRÜFTECHNIK GMBH		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of 12 sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 10 March 1999 (10.03.1999)	Date of completion of this report 21 September 1999 (21.09.1999)
Name and mailing address of the IPEA/EP European Patent Office D-80298 Munich, Germany Facsimile No. 49-89-2399-4465	Authorized officer  Telephone No. 49-89-2399-0

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE98/01178

## I. Basis of the report

1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):

- ☐ the international application as originally filed.
- ☒ the description, pages \_\_\_\_\_, as originally filed,  
pages \_\_\_\_\_, filed with the demand,  
pages 1-9, filed with the letter of 14 July 1999 (14.07.1999),  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. \_\_\_\_\_, as originally filed,  
Nos. \_\_\_\_\_, as amended under Article 19,  
Nos. \_\_\_\_\_, filed with the demand,  
Nos. 1-22, filed with the letter of 14 July 1999 (14.07.1999),  
Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the drawings, sheets/fig 1/4-4/4, as originally filed,  
sheets/fig \_\_\_\_\_, filed with the demand,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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3.

- 1). The amendments filed with the letter of July 14, 1999 introduce substantive matter which, contrary to PCT Article 34(2)(b), goes beyond the disclosure in the international application as filed. This concerns the following amendments:  
On page 6, lines 19 to 26, of the description, the applicants provide an explanation of what they would like to have been understood by the expression "targeted electrical coding". However, this explanation does not have sufficient basis in the original description and therefore cannot be used to interpret the claims in the manner intended by the applicants.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-22	YES
	Claims		NO
Inventive step (IS)	Claims	5-8	YES
	Claims	1-4, 9-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

### 2. Citations and explanations

2). Reference is made to the following documents:

D1: US-A-5 248 544  
D2: US-A-4 255 652  
D3: EP-A-0 097 570  
D4: US-A-5 388 862  
D5: EP-A-0 338 378

Document D5 was not listed in the international search report. A copy of the document has been transmitted to the applicants (PCT Guidelines, PCT/GL/3, Chapter VI, 7.24).

3). Owing to the features introduced by the words "and/or", independent Claim 1, which relates to the forming of security elements with an optical diffraction effect in documents with targeted electrical coding, comprises a number of coding alternatives. Since at least the alternative relating to "areas of metallic layers in different planes" is considered to be suggested by the available prior art, the subject matter of Claim 1 does not meet the inventive step requirements of PCT Article 33(3).

D5 (cf. Figure 8 and corresponding description) describes a document with a security element with an optical diffraction effect (hologram 15) and the formation of said security element, of which the electrical coding of information is targeted in the general sense of the word and which has areas of metallic layers in different planes.

Figure 8 makes it particularly clear that the metallised layer is formed by a relief pattern (40) that does not extend in a single, incident (by definition bordered by parallel surfaces) plane, but penetrates a plurality of planes that also contain layers 38 and 42.

In view of the security elements depicted in D4, Figures 2-4, the geometric coding forms defined in dependent Claims 2-4 should be something that a person skilled in the art would choose on the basis of familiar considerations, without being inventive. The same applies in view of document D1 to the choice of an OVD, hologram or kinegram as the security element with an optical diffraction effect, as per dependent Claims 9-11.

- 4). Independent Claim 12 relates to a device for testing security elements with an optical diffraction effect and a metallic reflection layer as per Claims 1 to 11, with the help of a capacitive scanner. Claim 12 is not restricted such that a number of adjacent emitting electrodes are disposed on the same side as a receiving electrode that extends along the emitting electrodes. The differences according to the applicants between the device as per Claim 12 and the arrangement known from D3 for testing documents provided with security elements

(filigranes) are therefore not supported by corresponding claim features.

Rather, document D3 disclosed a comparable capacitive sensor which, in line with the subject matter of Claim 12, has a series of adjacent electrodes (121-12n), a control electronics system and an evaluating electronics system for comparing the course of the detected signal and the courses of corresponding reference signals.

A person skilled in the art is familiar with a number of security elements for documents from D1, D2 and D4. In particular, D1 and D4 also describe security elements with an optical diffraction effect and which are provided with metallically conducting layers.

A person skilled in the art would therefore use the device as per D3 to test such documents that are provided with security elements such as those known from D1, D2 or D4, without thereby being inventive. Consequently, independent Claim 12 does not involve an inventive step (PCT Article 33(3)).

The features defined in dependent Claims 13-15 are substantially already known from document D3. Claims 16-20 concern definitions of the scanner dimensions and preferred fields of use for the testing device and fall under the routine work of a person skilled in the art. The information contained in dependent Claims 21 and 22 concerning the breadth of the scanner is suggested by D1 and D2.

Claims 13 to 22, in combination with the features of any claim to which they refer, do not meet the PCT

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inventive step requirements either.